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DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ASSEMBLY AND FABRICATION PROCEDURES FOR ACCESSORIES REQUIRED TO ADAPT A 55-GALLON DRUM TO A FUEL SUPPLY TANK USED WITH HEATER, SPACE, RADIANT TYPE, PORTABLE (TYPE II, MODEL 1941, LUQUID FUEL) FSN 4520-927-4214

Headquarters, Department of the Army, Washington, D. C.
30 March 1971

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SECTION I
GENERAL

1. Purpose and Scope. This bulletin —

a. Designates the supply assembly procedures for fittings that are assembled and become a fill and vent assembly for a military standard 55-gallon drum when adapted to a fuel supply tank for the type II model 1941, liquid fuel portable space heater.

b. Designates the supply assembly procedures for fittings that are assembled and become a fuel manifold assembly for a military standard 55-gallon drum when adapted to a fuel supply tank for the type II, model 1941, liquid fuel portable space heater.

c. Furnishes the necessary technical data required to fabricate and assemble three styles of drum stands that hold a military standard 55-gallon drum in the horizontal position for the purpose of dispensing fuel.

2. Recommendations for Publications Improvements.

a. Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Report should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Blvd., St. Louis, Mo. 63120.

b. Responsibility for the proper execution of forms, records, and reports rests upon the commanding officers of all units using this equipment; for forms, records, and reports required, see TM 38-750.

SECTION II
MATERIAL REQUIREMENTS

3. General

Material will be secured locally. Authorization for fabrication and assembly will be by local commander.

4. Specific

a. Fill and Vent Assembly. Refer to table 1.

Table 1. Material Required for Fill and Vent Assembly

Item	Fig.	Qty	Description
1	1	1	Elbow, Street, 90° 2" NPT, Galv Steel
2	1	1	Nipple, 2" NPT x 3" LG, Galv Steel
3	1	1	Cap, Fill, 2" NPT, Galv Steel, Simplex or equiv.

b. Manifold Assembly. Refer to table 2.

Table 2. Material Required for Manifold Assembly

Item	Fig.	Qty	Description
1	2	1	Nipple, ¾" NPT x 2½" Lg, Galv Steel
2	2	1	Tee, ½" x ½" x ¾", Galv Steel
3	2	2	Valve, ½" NPT x ¼" NPT, Morse-Smith No. 5025F, or equiv.
4	2	2	Coupling, Female, ¼" tube OD x ¼" NPT, Brass Imperial No. 664-F or equiv.

c. Drum Stand, 55-Gallon, Style A. Refer to table 3.

Table 3. Material Required for Style A, 55-Gallon Drum Stand

Item	Fig.	Qty	Description
1	5	4	Leg, L, 1¾" x 1¾" x 1/8" x 30-1/8" Lg, Steel
2	5	2	Brace, Cross, L, 1¼" x 1¼" x 1/8" x 20" Lg, Steel.
3	5	4	Foot, 12 ga Steel 5" x 5".
4	5	6	Washer, Flat, Rd, .375 ID x .875 OD x .083 thk, MS27183-13.
5	5	4	Pin, Cotter, 1/8" DIA x ½" Lg, MS24665-349
6	5	8	Rivet, Solid, ¼" DIA x 9/16" Lg, Steel
7	5	2	Rivet, Solid, ¼" DIA x 5/8" Lg, Steel
8	5	4	Pin, Solid, 5/16" DIA x 7/8" Lg, Steel

d. Drum Stand, 55-Gallon, Style B. Refer to table 4.

Table 4. Material Required for Style B, 55-Gallon Drum Stand

Item	Fig.	Qty	Description
1	6	1	Brace, Lifting, ¼" x 2½" x 18½", Steel
2	6	1	Brace, Front, L, 1¼" x 1¼" x 1/8" x 18½", Steel.
3	6	2	Brace, Top, ¼" x 1¼" x 24", Steel
4	6	1	Brace, Rear, ¼" x 2½" x 22½", Steel
5	6	1	Cradle, LH, L, 1/8" x 1¼" x 1¼" x 102", Steel
6	6	1	Cradle, RH, L, 1/8" x 1¼" x 1¼" x 102", Steel.

e. Drum Stand, 55-Gallon, Style C. Refer to table 5.

Table 5. Material Required for Style C, 55-Gallon Drum Stand

Item	Fig.	Qty	Description
1	7	1	Cradle, LH, L, 1¼" x 1¼" x 3/16" x 102", Steel
2	7	1	Cradle, RH, L, 1¼" x 1¼" x 3/16" x 102", Steel.
3	7	1	Brace, End, 7 Ga Steel, 1¼" x 58"
4	7	1	Brace, Top, 11 Ga Steel, 2" x 18½"
5	7	1	Brace, Front, 7 Ga Steel, 1¼" x 18"
6	7	1	Brace, Lifting, 7 Ga Steel, 3" x 18"
7	7	14	Screw, Cap, Hex Hd, ¼" - 20 UNC-2A x ¾, MS90725-6.
8	7	14	Nut, Hex, ¼-20 UNC-2B, Cad P1, MS51967
9	7	14	Washer, Lock, Split, Med, ¼", Cad P1, MS35338-44

5. Fill and Vent Assembly

The fill and vent assembly consists of parts listed in table 1 and shown in figure 1. The fill-vent cap requires no tools for opening when refueling is required, and when closed provides weather protection and a vent opening for air displacement.

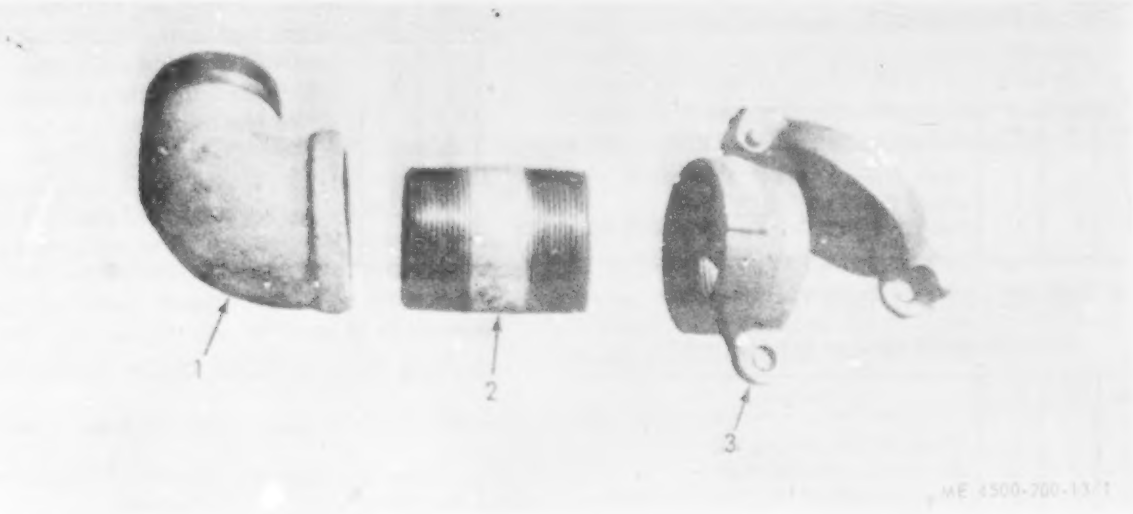


Figure 1. Fill and vent assembly, exploded view.

6. Manifold Assembly

The fuel manifold assembly consists of parts listed in table 2 and shown in figure 2. Either one or both of the outlets can be used by attaching the fuel inlet hose, furnished with type II, model 1941 space heater to the manifolds female coupling. The valves can be operated manually by turning the valve wheel clockwise, and provides an added safety feature by closing automatically when the valve surface reaches a temperature of 200°F.

Figure 2. Manifold assembly, exploded view.

7. Drum Stand, 55-Gallon, Style A

Style A stand shown in figure 3 is constructed of commercial standard steel as stated in table 3. It will collapse into a 15- x 30- x 4-inch package by pushing the left and right legs together. Each leg is provided with pads of approximately 5 square inches to increase the bearing surface. The pad is constructed so that it will adjust itself to uneven surfaces and can be attached for a permanent installation or removed if desired.

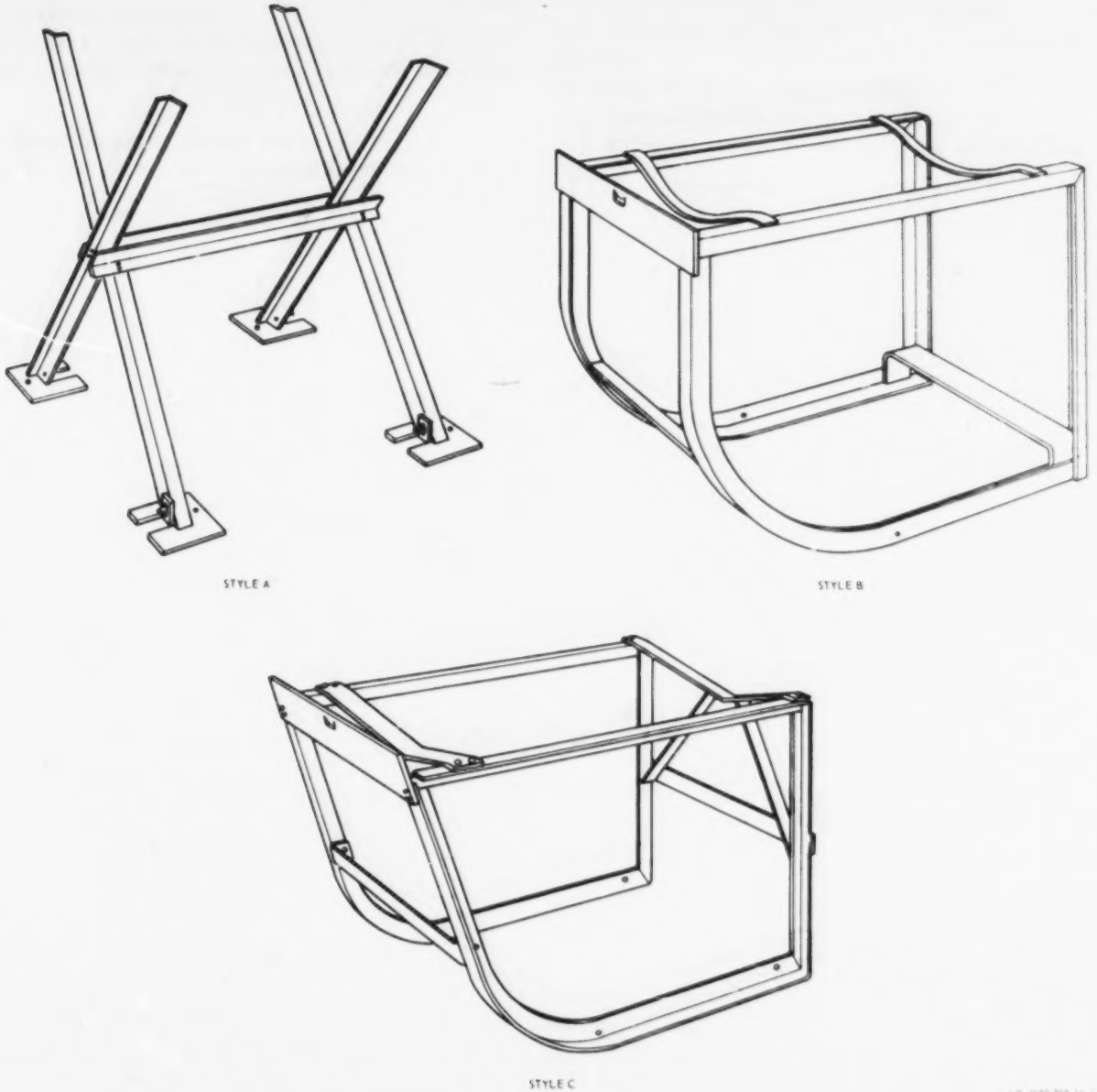


Figure 3. 55-Gallon drum stand, styles A, B, and C.

8. Drum Stand, 55-Gallon, Style B

Style B shown in figure 3 is constructed of commercial standard steel as stated in table 4. It is all welded and two 5/8-inch holes are provided in the base member for the insertion of wheels. This stand provides a means for one man to move a fully loaded 55-gallon drum from the upright position to a horizontal dispensing position. The dimensions are approximately 18 inches wide, 36½ inches long and 20½ inches high.

9. Drum Stand, 55-Gallon, Style C

Style C shown in figure 3 is constructed of commercial standard steel as stated in table 5. This style may be shipped disassembled. Six structural members and fourteen nuts, washers, and capscrews, make up the package whose size is 20 inches x 32 inches x 2 inches. About 15 minutes is required to assemble the stand. This stand also provides a means for one man to move a fully loaded 55-gallon drum from the upright position to a horizontal dispensing position.

SECTION IV
ASSEMBLY, FABRICATION, AND INSTALLATION INSTRUCTIONS

10. Fill and Vent Assembly

a. Refer to table 1 for the required parts.

b. Assemble and install parts as shown in figure 4.

11. Manifold Assembly

a. Refer to table 2 for the required parts.

b. Assemble and install parts as shown in figure 4.

12. Drum Stand, 55-Gallon, Style A

a. Refer to table 3 for the required material.

b. Fabricate and assemble material as shown in figure 5.

13. Drum Stand, 55-Gallon, Style B

a. Refer to table 4 for the required material.

b. Fabricate and assemble material as shown in figure 6.

14. Drum Stand, 55-Gallon, Style C

a. Refer to table 5 for the required material.

b. Fabricate and assemble material as shown in figure 7.

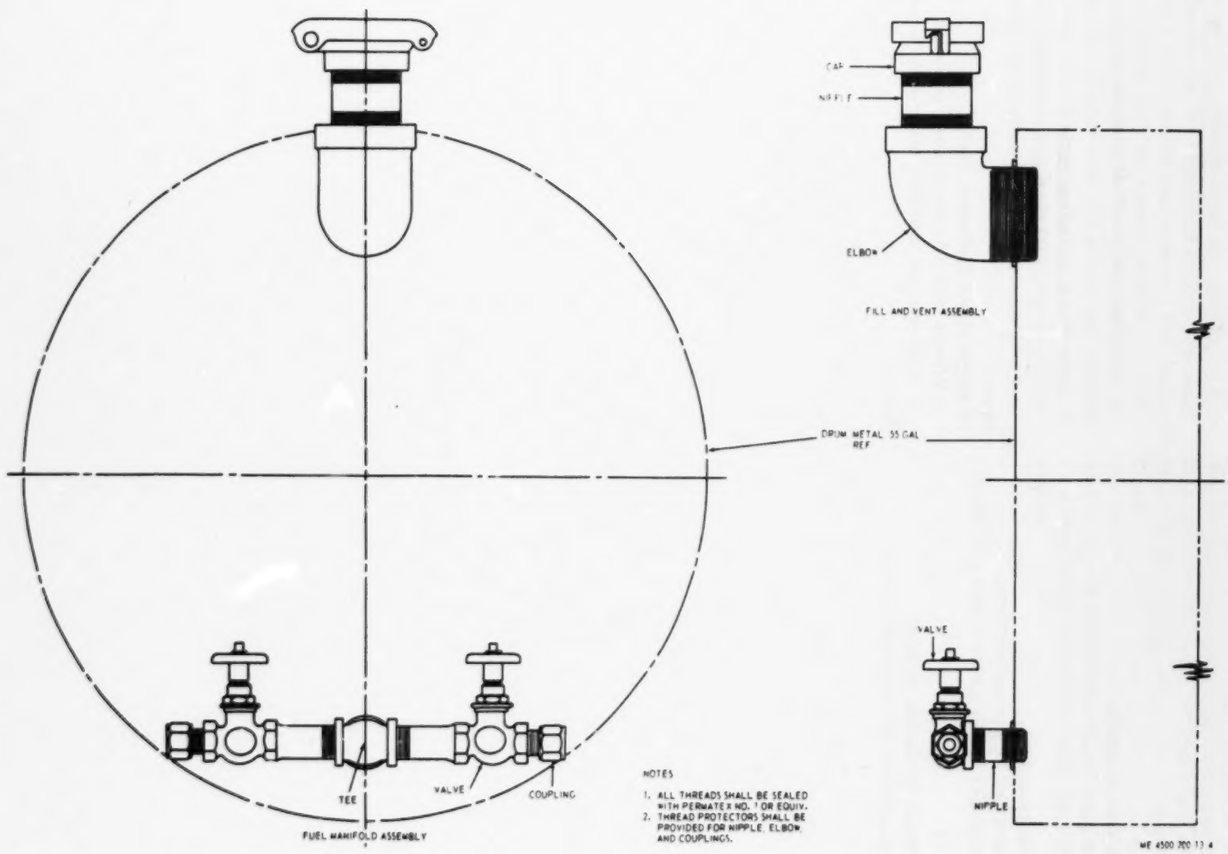
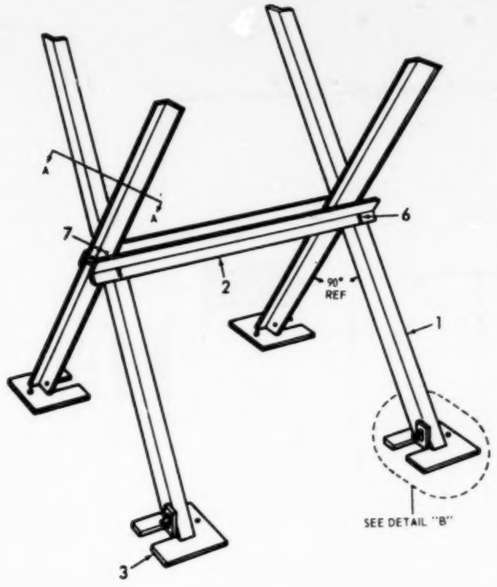
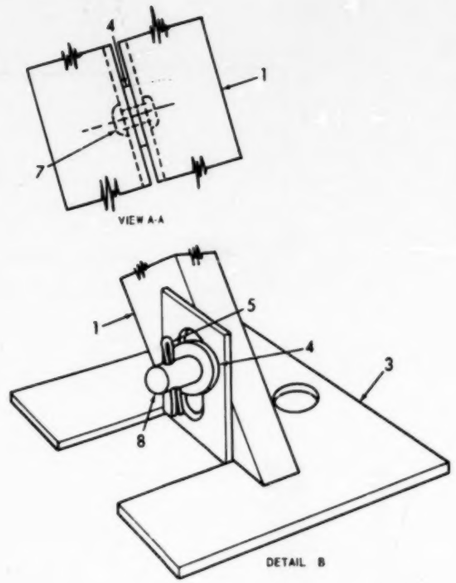
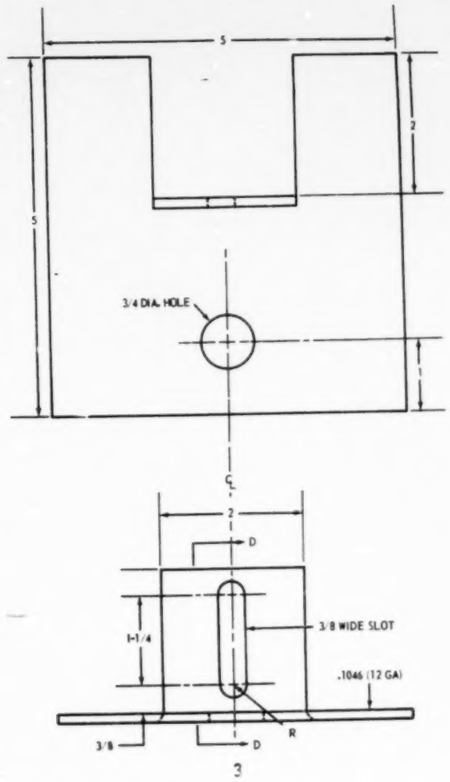
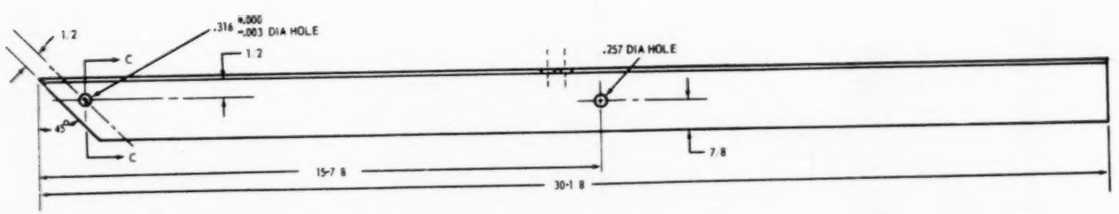


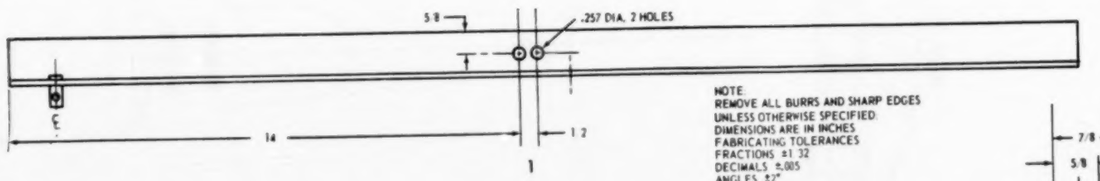
Figure 4. Fill and vent assembly and manifold assembly, assembled and installed.











NOTE:
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DIMENSIONS ARE IN INCHES
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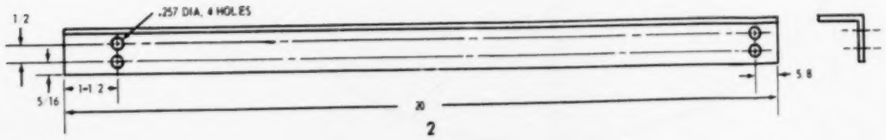
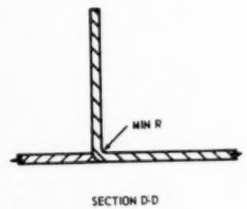
FRACTIONS ±1/32
DECIMALS ±.005
ANGLES ±2°





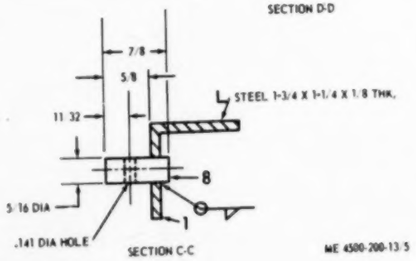


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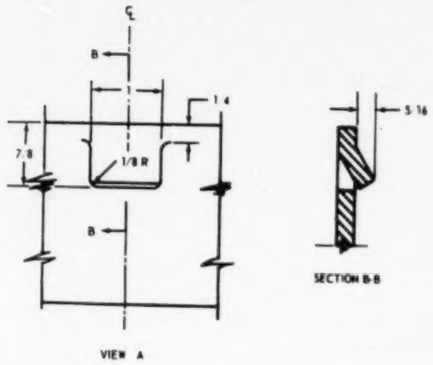
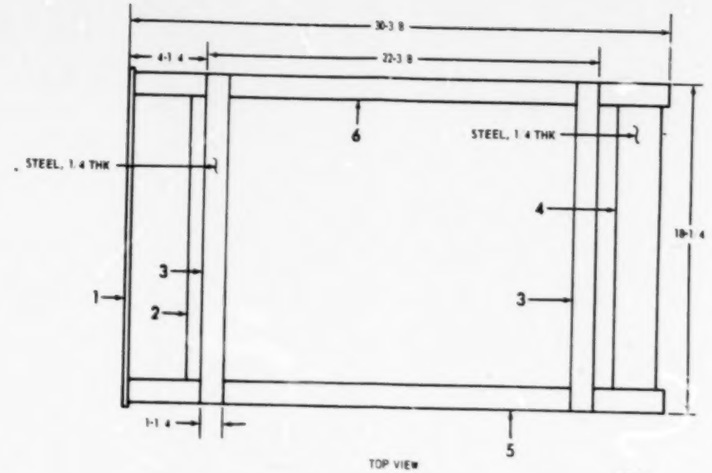
Figure 5. Fabrication and assembly of 55-gallon drum stand, style A.





NOTE
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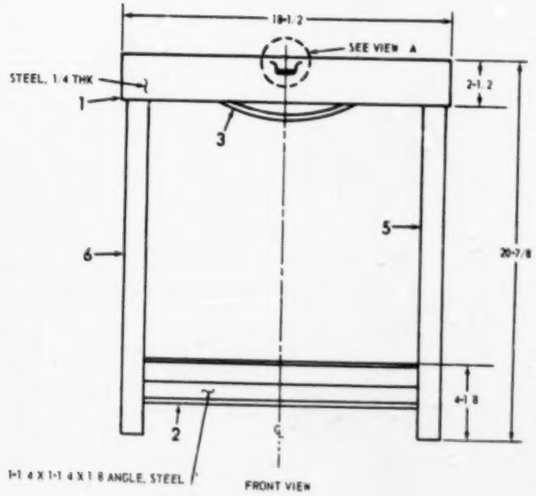

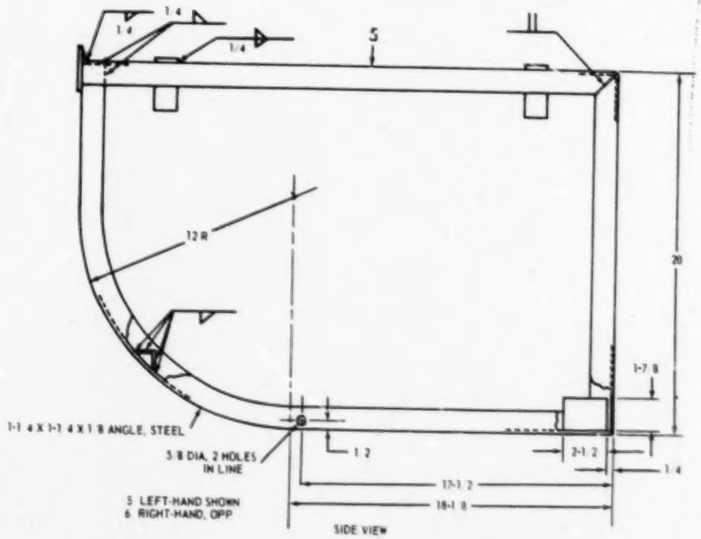

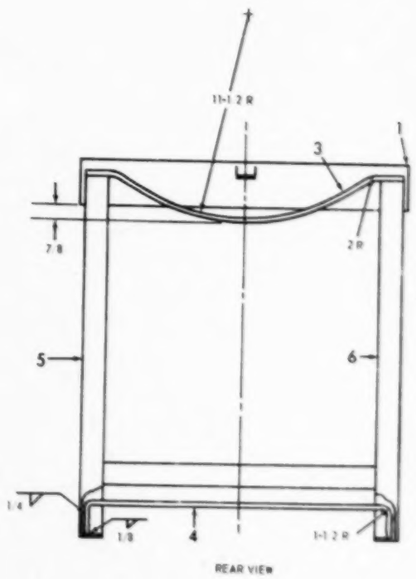

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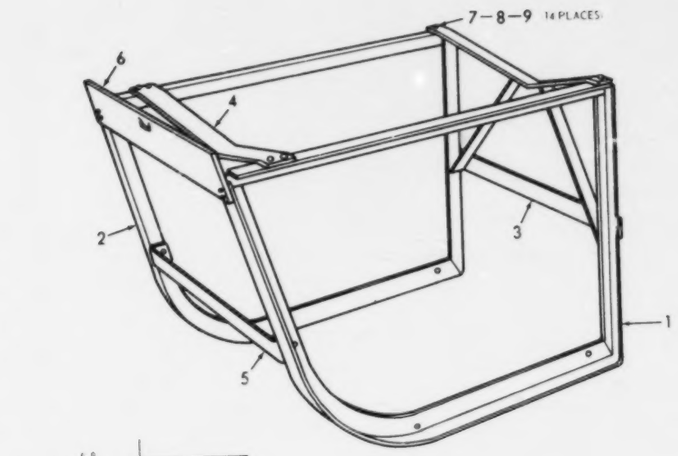
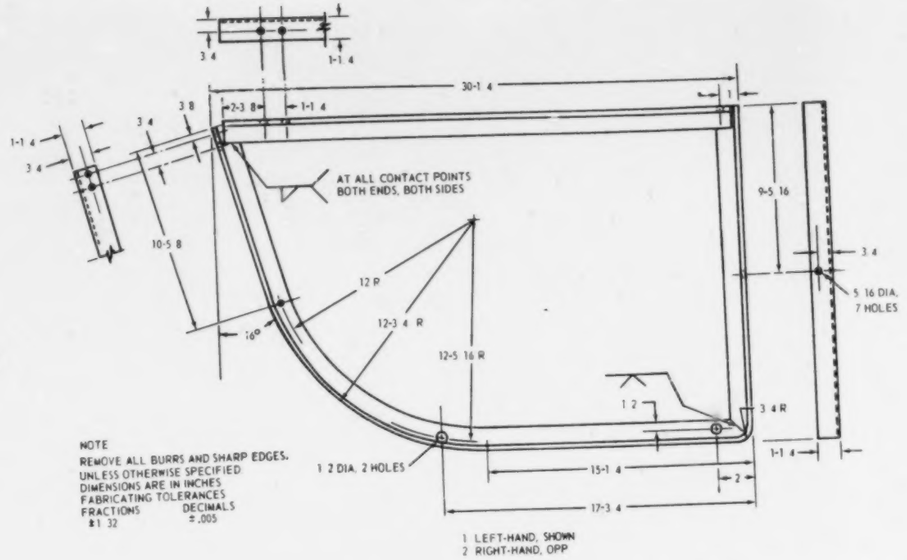
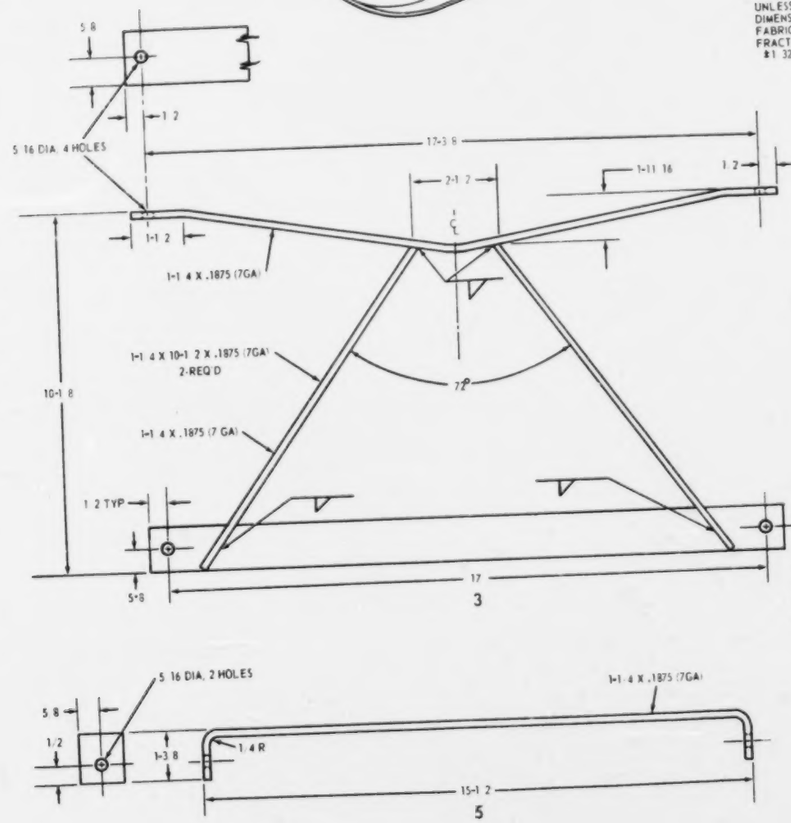
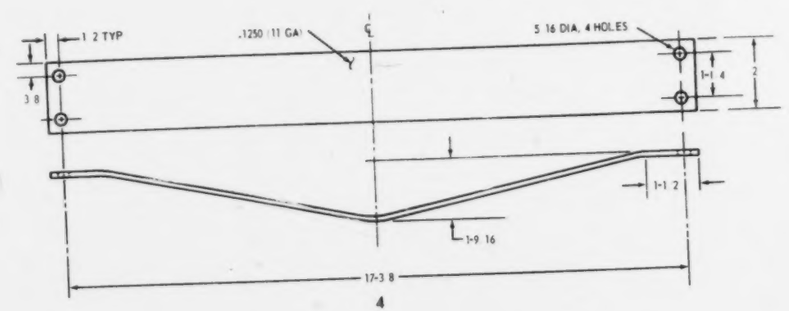
Figure 6. Fabrication and assembly of 55-gallon drum stand, style B.









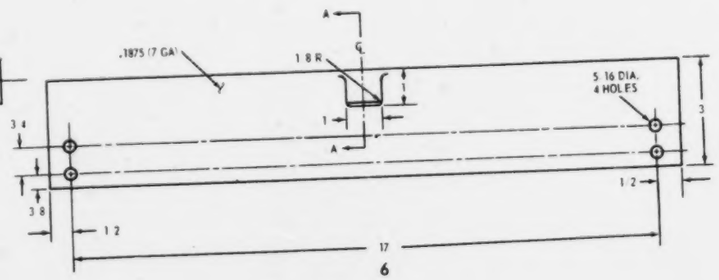


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Figure 7. Fabrication and assembly of 55-gallon drum stand, style C.

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